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Attorney Docket No. **P50523-C2**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Marquis, et al.

Continuation of: 09/658,256

Filed: Herewith

For: INHIBITORS OF CYSTEINE PROTEASE

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Preliminary to calculating filing fees and examining this application, please amend the application as follows:

In the Specification:

Please insert the attached 2 page abstract, following the claims.

In the Claims:

18. (Amended) A pharmaceutical composition comprising a compound according to any one of claims 1 to 17 and a pharmaceutically acceptable carrier.

Cancel claims 26-33.

REMARKS

An abstract on a separte sheet is attached as required under 37 CFR 1.72(b). Claim 18 has been amended so that the claim set complies with the proper U.S. claim format. Entry of this preliminary amendment into the record is requested.

Continuation of: 09/658,256
Group Art Unit No.: Unknown

Furthermore, attached hereto is a marked-up version of the changes made to the claims by the current preliminary amendment. The attached page is captioned: **"Version with markings to show changes made."**

Respectfully submitted,

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Continuation of: 09/658,256
Group Art Unit No.: Unknown

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

The enclosed abstract is the same as the abstract from the published international application. No changes have been made. Therefore, a marked up version is not necessary.

In the claims:

Claims 26-33 have been canceled.

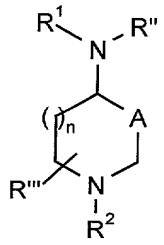
Claim 18 has been amended as follows:

18. (Amended) A pharmaceutical composition comprising a compound according to ~~any one of claims 1 to 17~~ claim 1 and a pharmaceutically acceptable carrier.

ABSTRACT OF THE DISCLOSURE

INHIBITORS OF CYSTEINE PROTEASE

This invention relates to compounds of formula (I):

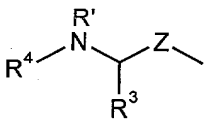


(I)

wherein:

A is C(O) or CH(OH);

R^1 is



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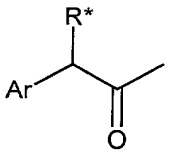

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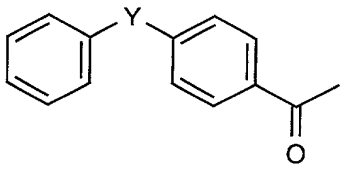
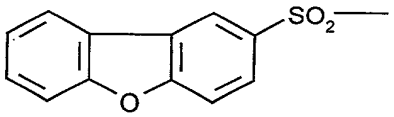
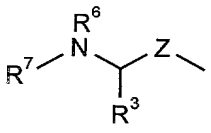


, or



;

R^2 is H, $C_{1\text{-}6}$alkyl, $C_{3\text{-}6}$cycloalkyl-$C_{0\text{-}6}$alkyl, Ar-$C_{0\text{-}6}$alkyl, Het-$C_{0\text{-}6}$alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, adamantyl-C(O)-, or



;

R" is H, $C_{1\text{-}6}$alkyl, Ar-$C_{0\text{-}6}$alkyl, or Het-$C_{0\text{-}6}$alkyl;

R"' is H, $C_{1\text{-}6}$alkyl, $C_{3\text{-}6}$cycloalkyl-$C_{0\text{-}6}$alkyl, Ar-$C_{0\text{-}6}$alkyl, or Het-$C_{0\text{-}6}$alkyl;

each R^3 independently is H, C_{2-6}alkenyl, C_{2-6}alkynyl, Het, Ar or C_{1-6}alkyl optionally substituted by OR', SR', NR'_2, $R'NC(O)OR^5$, CO_2R', $CO_2NR'_2$, $N(C=NH)NH_2$, Het or Ar;

R^4 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, R'HNCH(R')C(O)-, or $R^5OC(O)NR'CH(R')C(O)$-;

each R^5 independently is C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, Ar-C_{0-6}alkoxy, Het-C_{0-6}alkoxy, or C_{1-6}alkyl optionally substituted by OR', SR', NR'_2, $R'NC(O)OR^5$, CO_2R', $CO_2NR'_2$, $N(C=NH)NH_2$, Het or Ar;

R^6 is H, C_{1-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl and R^7 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, R'HNCH(R')C(O)-, or $R^5OC(O)NR'CH(R')C(O)$-; or R^6 and R^7 are connected to form a pyrrolidine, a piperidine, or a morpholine ring;

each R' independently is H, C_{1-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl;

R* is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl;

Y is a single bond or O;

each Z independently is CO or CH_2; and

n is 0, 1, or 2;

or a pharmaceutically acceptable salt thereof, which are inhibitors of cysteine proteases, particularly cathepsin K, and are useful in the treatment of diseases in which inhibition of bone loss is a factor.